



PATENT APPLICATION

IN THE U.S. PATENT AND TRADEMARK OFFICE

September 26, 2002

~~1~~ SC  
NEAL

Applicants: Tsutomu SHIKADA et al

For: MANUFACTURING METHOD OF HYDROGEN AND SYNTHESIS GAS

Serial No.: 10/015 879

Group: 1754

Confirmation No.: 4687

Filed: October 30, 2001

Examiner: Unknown

Atty. Docket No.: Tanaka Case 15A

Assistant Commissioner for Patents  
Washington, DC 20231

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**SECOND AMENDMENT BEFORE FIRST OFFICE ACTION**

Sir:

Prior to issuance of the first Office Action in the above-identified application, kindly enter the following:

**IN THE CLAIMS**

Please amend Claims 20 and 24 as shown below. A marked-up copy of the amended claims is enclosed.

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20. (Amended) A system for producing a synthesis gas comprising means for contacting a mixed gas comprising dimethyl ether and one of water vapor and carbon dioxide gas with a first catalyst and a second catalyst comprising palladium, iridium, platinum or rhodium as an active component.

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24. (Amended) A system for producing hydrogen gas comprising means for contacting a mixed gas comprising dimethyl ether and carbon dioxide gas with a first catalyst and a second catalyst comprising copper, iron, cobalt, palladium, iridium, platinum, rhodium or nickel, in a form of an oxide or sulfide, as an active component.

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Please add new Claim 29 as follows.

Applicants : Tsutomu SHIKADA et al  
 Title : MANUFACTURING METHOD OF HYDROGEN AND SYNTHESIS GAS  
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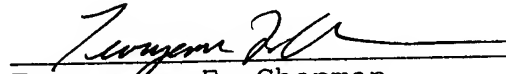
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Assistant Commissioner for Patents  
 Washington, DC 20231

## FIRST CLASS MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service under 37 CFR 1.8 as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington DC 20231, on September 26, 2002.

  
 Terryence F. Chapman

TFC/smd

FLYNN, THIEL, BOUTELL  
 & TANIS, P.C.  
 2026 Rambling Road  
 Kalamazoo, MI 49008-1699  
 Phone: (269) 381-1156  
 Fax: (269) 381-5465

Dale H. Thiel  
 David G. Boutell  
 Ronald J. Tanis  
 Terryence F. Chapman  
 Mark L. Maki  
 David S. Goldenberg  
 Sidney B. Williams, Jr.  
 Liāne L. Churney  
 Brian R. Tumm  
 Tricia R. Cobb

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 Reg. No. 32 549  
 Reg. No. 36 589  
 Reg. No. 31 257  
 Reg. No. 24 949  
 Reg. No. 40 694  
 Reg. No. 36 328  
 Reg. No. 44 621

Correspondence: Second Amendment Before First Office Action  
 dated September 26, 2002  
 including enclosures listed thereon

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